

**Engagement Opportunities in NASA STEM (EONS)  
FY23 NASA Research Announcement (NRA) NNH23ZHA001N-MCA**

**MUREP Curriculum Awards (MCA)**

**Title:** PCCC Urban Climate Change Initiative

**Institution:** Passaic County Community College

**City/State:** Paterson, New Jersey

**PI:** Ali Saleh

**FY:** 2023

Passaic County Community College (PCCC) is requesting federal support from NASA's MUREP Curriculum Awards (MCA) Program. The proposed project will take place over a 3-year period and will involve 220 under-represented minority (URM) students and 30 full-time and part-time faculty members. The project is a partnership between PCCC, a federally-defined Hispanic Serving Institution (HSI), NASA Langley Research Center (LaRC) and Montclair State University (MSU).

The project's partners will support the project activities and help to achieve the project goals and objectives: Goals and Objectives: Goal 1: Revitalize the A.S. Degree in Environmental Sustainability to strengthen research capacity and prepare students for NASA-related careers and further education. Objective 1.1: Within 36 months, five (5) major courses will be revised in partnership with NASA Subject Matter Experts. Objective 1.2: Within 36 months, 30 full-time and part-time STEM faculty members (20 from PCCC and 10 from Montclair State University) will have completed 20 hours of culturally responsive professional development. Objective 1.3: Within 12 months, a Climate Change laboratory will be established to support student learning in revised courses. Goal 2: Engage under-represented minority (URM) students in experiential learning activities and support services that will prepare them for NASA-related careers and further education. Objective 2.1: Within 36 months, 60 URM students will have enrolled in the A.S. Degree in Environmental Sustainability. Objective 2.2: Within 36 months, at least 60 URM students will complete paid NASA internships and/or research experiences with partner agencies. Objective 2.3: Within 36 months, 220 URM students will have benefitted from culturally responsive support services.

Method of Approach: The project will emphasize student-centered approaches, including experiential learning, culturally responsive practices, holistic support services, and pathways towards the bachelor's degree. The Project's four strategies include the following: 1) Revise Courses to Provide URM students with Research Skills; 2) Enroll URM Students in Revised Courses and Environmental Sustainability Program; 3) Expand Experiential Learning through Partnerships; and 4) Align Services with PCCC Center for STEM Excellence. Relevance to Nasa Themes: The project will focus on student knowledge and competency related to climate change.

This is the major focus of NASA as described in the 2022 NASA Strategic Plan and the NASA Climate Action Plan. In the Strategic Plan, NASA states its intention to “become a world leader in understanding, analyzing, and addressing climate change and is committed to understanding the effects of climate change and to conduct critical research.” Use of Nasa Content: The project will utilize data from NASA resources such as the Earth System Observatory and TEMPO. LaRC scientists will assist as Subject Matter Experts in curriculum review and revision, will serve as guest presenters, will share research findings and data, will assist PCCC students in analyzing and using data from TEMPO and the Earth System Observatory, and will assist PCCC students in accessing internships at LaRC.